



## Quiet Diesel™ Series Operation, Maintenance and Parts

### PRE-START CHECKS

Before the first start of the day and after every eight hours of operation:

1. Check for proper oil and coolant levels.
2. Check for fuel, coolant and water leaks, mechanical damage, loose parts, damaged exhaust hose, loose or corroded battery connections, clogged sea water strainer, and CO monitors that don't work. Service as necessary.
3. Check for swimmers that might be exposed to the engine exhaust.
4. Turn off air conditioners and other large appliances.

### PRIMING THE FUEL SYSTEM

If the generator ran out of fuel, push the control switch to **STOP (Prime)** and hold for at least 30 seconds.

### STARTING THE GENERATOR

1. Push and hold the control switch at **START (Pre-heat)** until the generator starts. The *amber* status lamp on the control switch will blink rapidly.\* The *amber* lamp will go out and the *green* run lamp on the switch will light after the starter has disconnected and the engine is up to speed. (Depending on how cold the engine is, preheat can take as long as 15 seconds before cranking starts.)
2. For longer engine life, let the engine warm up for two minutes before turning on air conditioners and other large appliances.
3. Check for water, coolant, fuel and exhaust leaks. Stop the generator immediately if there is a leak.

**⚠ WARNING** *Fuel and exhaust leaks can lead to severe personal injury or death. Shut down the generator immediately. Repair fuel leaks immediately. Do not run the generator until fuel and exhaust leaks have been repaired.*

4. **If the generator fails to start**, cranking will continue in 20 to 60 seconds, depending on how cold the engine is, and the *amber* status lamp will blink Shutdown Code No. 4. See *Troubleshooting* (Operator's Manual) if the generator does not start after two or three tries.

**⚠ CAUTION** *Do not continue cranking and risk burning out the starter or flooding the engine (exhaust flow during cranking is too low to expel water from the exhaust system). Find out why the generator does not start and repair as necessary.*

5. **If the generator shuts down**, the *amber* status lamp will blink a shutdown code. See SHUTDOWN CODES below.

### STOPPING THE GENERATOR

Turn off air conditioners and other large appliances and let the generator run for two minutes to cool down. Then touch the Control Switch to **STOP (Prime)**.

### SHUTDOWN CODES

The *amber* status lamp will blink if the generator shuts down. It will blink 1, 2, 3, 4, 5 or 7 times, pause, and then repeat the blinking. **The number of blinks is the shutdown code.** Blinking continues for five minutes and stops. To restore blinking press the control switch to **STOP (Prime)** until the *amber* lamp comes on (3 to 4 seconds). Then press **STOP (Prime)** three times to restore blinking.

- **One blink** indicates shutdown due to high engine temperature.
- **Two blinks** indicate shutdown due to low oil pressure.
- **Three blinks** indicate shutdown that may require service. See *Troubleshooting* in the Operator's Manual.
- **Four blinks** indicate shutdown due to a failure to start within the time allowed for cranking.
- **Five blinks** indicate shutdown because carbon monoxide was detected.
- **Seven blinks** indicate shutdown due to a loss of raw water flow for engine and exhaust cooling.

See *Troubleshooting* in the Operator's Manual for more information.

### CUMMINS ONAN DIGITAL DISPLAY

See the generator Operator's Manual for details.

\* The green run lamp and gauges will also flash momentarily.

### PERIODIC MAINTENANCE SCHEDULE

	MDKBH	MDK BK, MDKBL, MDKBM, MDKBN, MDKBP, MDKBR, MDKBS, MDKBV	MDKBT, MDKBU	MDDCA, MDDCB, MDDCC, MDDCD, MDDCE, MDDCF, MDDCG, MDDCH, MDDCJ
General Inspection <sup>1</sup>	Every day, 8 Hrs	Every day, 8 Hrs	Every day, 8 Hrs	Every day, 8 Hrs
Check Battery <sup>2</sup>	Monthly, 100 Hrs	Monthly, 100 Hrs	Monthly, 100 Hrs	Monthly, 100 Hrs
Check V-Belt Tension <sup>3</sup>				
Drain Water from Fuel Filters (Primary or Secondary)				
Check Siphon Break				
Change Oil/Oil Filter	First 50 Hrs – Yearly, 200 Hrs	First 50 Hrs – Yearly, 200 Hrs	First 50 Hrs – Yearly, 350 Hrs	First 50 Hrs – Yearly, 350 Hrs
Check Brushes & Slip Rings <sup>4</sup>	Yearly, 200 Hrs	–	–	–
Change Fuel Filter	Yearly, 500 Hrs	Yearly, 500 Hrs	Yearly, 500 Hrs	Yearly, 350 Hrs
Replace Pump Impeller				Yearly, 500 Hrs
Replace Zinc Anode	–	800 Hrs	1000 Hrs	2 Yrs, 2100 Hrs
Adjust Valve Lash <sup>4</sup>	800 Hrs			
Change Coolant, Pressure Cap & Thermostat	2 Yrs	2 Yrs	2 Yrs	5 Yrs, 2000 Hrs
Change Generator Bearing(s) & Drive Belt <sup>4</sup>	5 Yrs, 2000 Hrs	5 Yrs, 2000 Hrs	5 Yrs, 2000 Hrs	
Check Air Filter	–	–	–	Yearly, 700 Hrs

1. Includes Oil Level, Coolant Level, Fuel System, Exhaust System, Battery, and Sea Water Strainer Checks

2. See battery manufacturer recommendations

3. Check for slippage, cracking and wear (pump drive belt only)

4. Must be performed by a trained and experienced mechanic (Cummins Onan Distributor or Dealer) in accordance with the engine and generator service manuals

### MAINTENANCE PARTS

	MDKBH	MDK BK, MDKBL, MDKBM, MDKBN	MDKBP, MDKBR, MDKBS, MDKBV	MDKBT, MDKBU	MDDCA, MDDCB, MDDCC, MDDCF, MDDCG	MDDCD, MDDCE, MDDCH, MDDCJ
Oil Filter	185-7444	185-5835	122-0810	122-0906	122-0885	122-0885
Fuel Filter	149-2106	149-2106	149-2106	149-2804	149-2722 & 149-2723	149-2724 & 149-2725
Crankcase Breather	–	185-6721 (spec A only)	185-6721 (if included)	123-2327	123-2246	123-2246
Pump Impeller	541-1524	541-1519	541-1521	541-1316	132-0436	132-0436
12V Glow Plugs <sup>1</sup>	185-5421	185-5421 (spec A-D) 333-0802 (begin spec E)	185-5990	333-0745	–	–
24V Glow Plugs <sup>1</sup>	–	185-7107	185-6725	333-0746	–	–
Zinc Pencil	–	130-4434	130-4434	130-4434	130-6228	130-6228
V-Belt	511-0197	185-6934	Note 2	511-0237	511-0215	511-0215
Oil Filter Wrench	420-0577	–	–	–	–	–
Air Filter	–	–	–	–	140-3752	140-3752
Cruise Kit	100-3478-08	100-3478-52	Note 3	100-3478-60	–	–

1. Number of glow plugs: 2-MDKBH; 3-MDKBL & MDK BK; 4-MDKBM, MDKBN, MDKBP, MDKBR, MDKBT, MDKBU and MDKBV; 5-MDKBS

2. Negative ground (Option #B200 or B201): 511-0201 (MDKBP, MDKBR, and MDKBV), 185-7055 (MDKBS); isolated ground systems (Option #B379 or B380): 511-0211

3. Negative ground (Option #B200 or B201): 100-3478-54 (MDKBP, MDKBR, and MDKBV), 100-3478-56 (MDKBS); isolated ground systems (Option #B379 or B380): 100-3478-55

### ENGINE FLUID CAPACITIES

	MDKBH	MDK BK, MDKBL	MDKBM, MDKBN	MDKBP, MDKBR	MDKBS	MDKBT, MDKBU	MDDCA, MDDCB, MDDCC, MDDCF, MDDCG	MDDCD, MDDCE, MDDCH, MDDCJ
Oil	2.1L (2.2Qt)	4.0L (4.2Qt)	4.3L (4.5Qt)	7.6L (8Qt)	12L (12.7Qt)	10.4L (11Qt)	12.6L (13.3Qt)	19.4L (20.5Qt)
Coolant	2.1L (2.2Qt)	4.0L (4.2Qt)	5.0L (5.3Qt)	7.6L (8Qt)	7.6L (8Qt)	13.7L (14.5Qt)	14L (15Qt)	30L (32Qt)

Shipped with 15W40 engine oil and 50/50 water/ethylene glycol coolant

Contact your Cummins Onan Distributor or Dealer for more information.

Cummins Power Generation, 1400 73rd Ave. NE, Minneapolis, MN 55432, USA, Phone 1-763-574-5000, Toll-free 1-800-888-6626, Fax 1-763-574-5298, Email [www.cumminsonan.com/contact](http://www.cumminsonan.com/contact), [www.cumminsonan.com](http://www.cumminsonan.com).

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